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7/10

15(G)

H/= 15-16 Hungarian Signals
p 18 Russian Signals Service

TICOM/I-130

TOP SECRET 'U'

HOMEWORK BY HAUPTMANN H E R O L D, O.C. LN Regt. III/353

The attached document is a translation of the homework done by HEROLD at A.D.I.(K), at the request of TICOM.

A report of the interrogation of HEROLD was issued as TICOM/I-65.

TICOM
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HOMEWORK GIVEN TO HAUPTMANN HEROLD 6/8/45.

1) History of organisation of G.A.F. Horchdienst particularly:-

   a) Earliest stages

   b) Evolution of III/Abt. from W-Stellen (with fullest details)
   Remaining W-Stellen

   c) Final reorganisation. How was III/4 converted to III/353 (company by company)

2) Cryptography

   a) Details of HEROLD's own work

   b) Details of work done at Constanza Jugoslav, Greek, British } describe systems attempted and solved.

   c) Describe in detail work on Russian
   2 - Z
   3 - Z
   4 - Z

   d) Describe methods (interception, forwarding, study, results) on 5 - Z

3) Career of Hauptmann HEROLD in Horchdienst from 1937 - 1945 (units, locations, tasks, successes).

4) Liaison with

   a) (Heeres) Kdr. d. N.A.

   b) Marine B-Stellen (Konstanza, Eupatoria)

   c) Ungarischem H-Dienst

5) R/T Cover in the Southern Sector of the Eastern Front

6) Russian 'Y' Service (Southern Sector of the Eastern Front)

6/8/45.

DEVELOPMENT AND ORGANISATION OF THE WIRELESS LISTENING SERVICE IN THE EAST (SOUTHERN SECTOR)

a). The formation of the German Listening Service of the G.A.F. commenced in 1936. The first listening stations for covering the east were situated in INSTERBURG, GLINDOW near BERLIN, and PULSNITZ near DRESDEN. For security reasons these listening stations were called W Stations (Weather Radio Receiving Stations) in 1937. The G.A.F. Listening Station in INSTERBURG existed for only a short time. In place of it in East Prussia the W KOBBELBUDE near KOENIGSBERG was set up. Each W Station had at its disposal a varying number of WO Stations (weather research stations), which formed the direction-finding basis for the W Station. Interception was also carried out from time to time at the WO Stations.

The main station of the G.A.F. Listening Service was the WIO (Chi-Stelle) with its seat at B rlin. The communication of results was done by teleprinter and courier.

The first eastern areas covered were Czecho-slovakia, Poland and the Soviet Union. The W Station at PULSNITZ covered the southern sector in the east.

After the formation of the Luftflotten from the Luftkreise, each Luftflotte was allotted a W main station. On the outbreak of war these W main stations formed the evaluation companies of the radio listening Abteilungen. After the incorporation of Austria in Reich territory the Austrian Listening Service was taken over by the Luftwaffe. W main station 4 at Luftflotte 4 at that time was partly manned by Austrian listening personnel. W stations attached to W main station 4 were:-

W 14 at HIRSCHSTETTEN
W 24 at BRESLAU
W zbV at BUDAPEST, which was formed from the listening stations set up in Hungary by the Ln.Abt. Ob.d.L. in October 1938.

b) On the formation of Ln.Rgt.4 at Luftflotte 4 the III Abteilung of this regiment became a listening Abteilung. Abteilung III was under the command of Ln.Rgt.4 for disciplinary purposes and operationally under the command of the Chief Signals Officer of Luftflotte 4. The W main station and the W stations were under the command of Abteilung III.

The 10th company was set up with the Abteilung as the first motorised company. The personnel for it was drawn from the W stations and available wireless personnel of the regiment. This company was already in action in the Polish campaign. The Abteilung itself began by training recruits. On a second motorised company being set up, the 9/4, personnel trained by the Abteilung itself was principally utilised for it. Later there was no further training of recruits in the Abteilung. Wireless personnel allocated as replacements were trained for the requirements of the Listening Service, before coming for employment with the Abteilung, at the former WO station PRE[illegible]STAETTEN near GRAZ, which was set up by the Abteilung as a listening school.

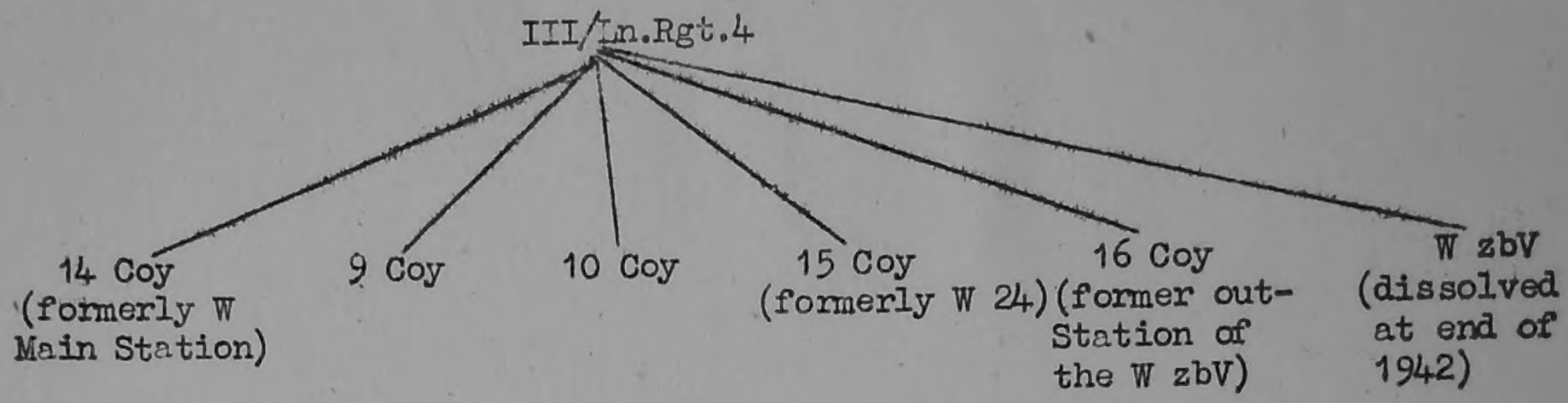
W 14 moved to ATHENS after the end of the Greek campaign, became an independent company there, and later formed the foundation for the Radio Listening Abteilung South-east at G.A.F. command, South-east.

At the beginning of the Russian campaign, the III/Ln.Rgt.4 had at its disposal the following units:-

1 W Main Station (Evaluation company)
2 Wireless Listening Companies (Motorised) and
2 W Stations.

The W 24 moved to REICHSHOF after the campaign began and there formed a company (15/4). The out-station of the W zbV in KONSTANZA likewise became a company (16/4). These two companies were static and remained at their stations.

In 1941-1942 the organisation of the Abteilung was as follows:-



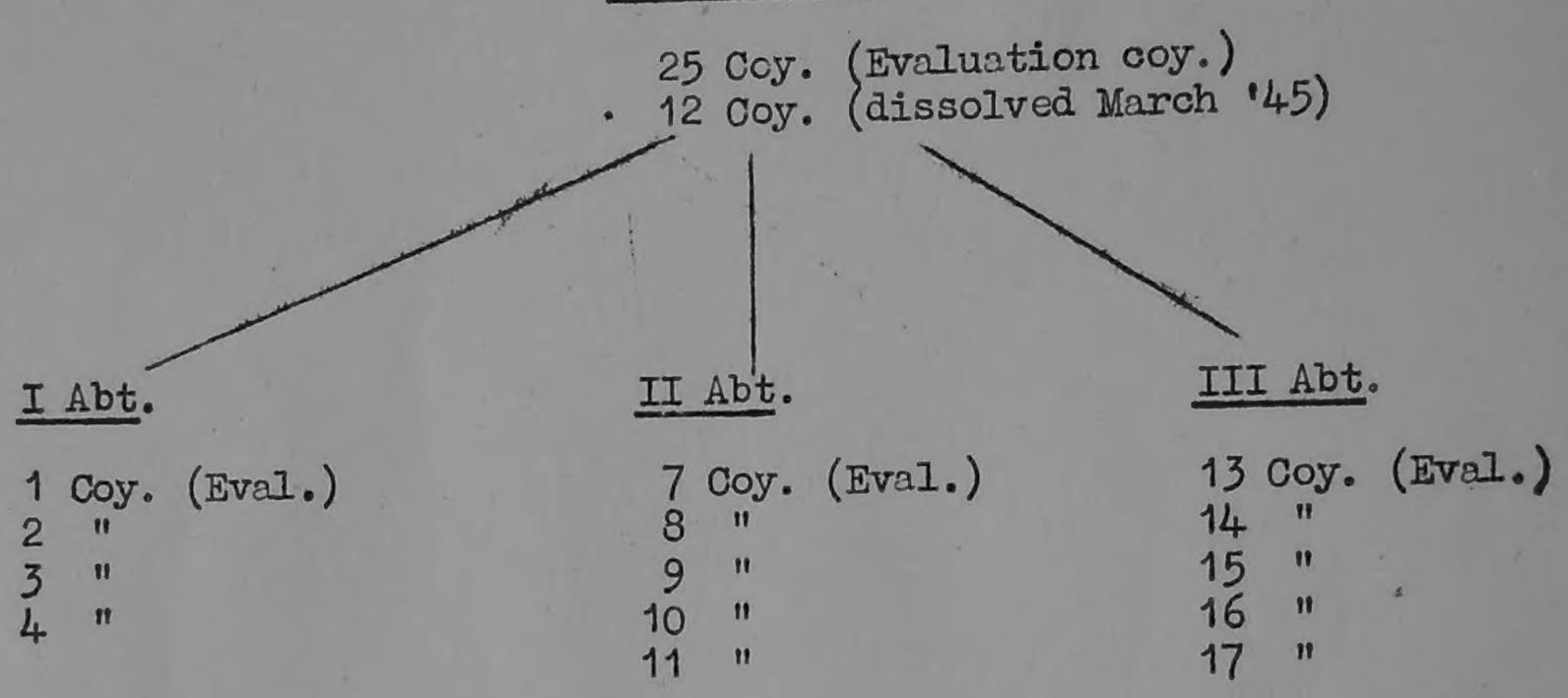
Further the Abteilung had at its disposal for operational purposes the wireless listening companies of the Fliegerkorps (pl), but they frequently changed theatres of operations with their corps. The demand of Sig.Int. to put the wireless listening companies of the Fliegerkorps (pl.) in every respect under the command of the wireless listening Abteilungen met with vigorous resistance on the part of the corps and could not be put into effect in the southern sector until September 1944. The disciplinary subordination of the Abteilung to LN.Rgt.4 sometimes met with difficulties, as there was not always at regiment the necessary understanding of the requirements of the wireless listening service. A demand was therefore made that the wireless listening Abteilungen should be put under the command of the chief signals officer of the Luftflotten as independent Abteilungen. Unfortunately this never took place.

c) In November 1944 the new Ln. Wireless Listening Regiment East (Ln.Rgt.353) was formed from the three existing wireless listening Abteilungen in the east. The formation of this regiment was unwise at that already critical time. Servicing and supplying the Abteilungen by the regiment was hardly possible, as the regimental H.Q. was so far from them. Transport conditions were then already very bad and line communications were often interrupted. In spite of the considerable increase in radio traffic, this only very imperfectly filled the gap. Had it not been for the splendid cooperation with the Luftflotte and the Luftflotte's understanding of the Abteilung's serious plight, the many difficulties that arose would have considerably hampered the work of the Abteilung.

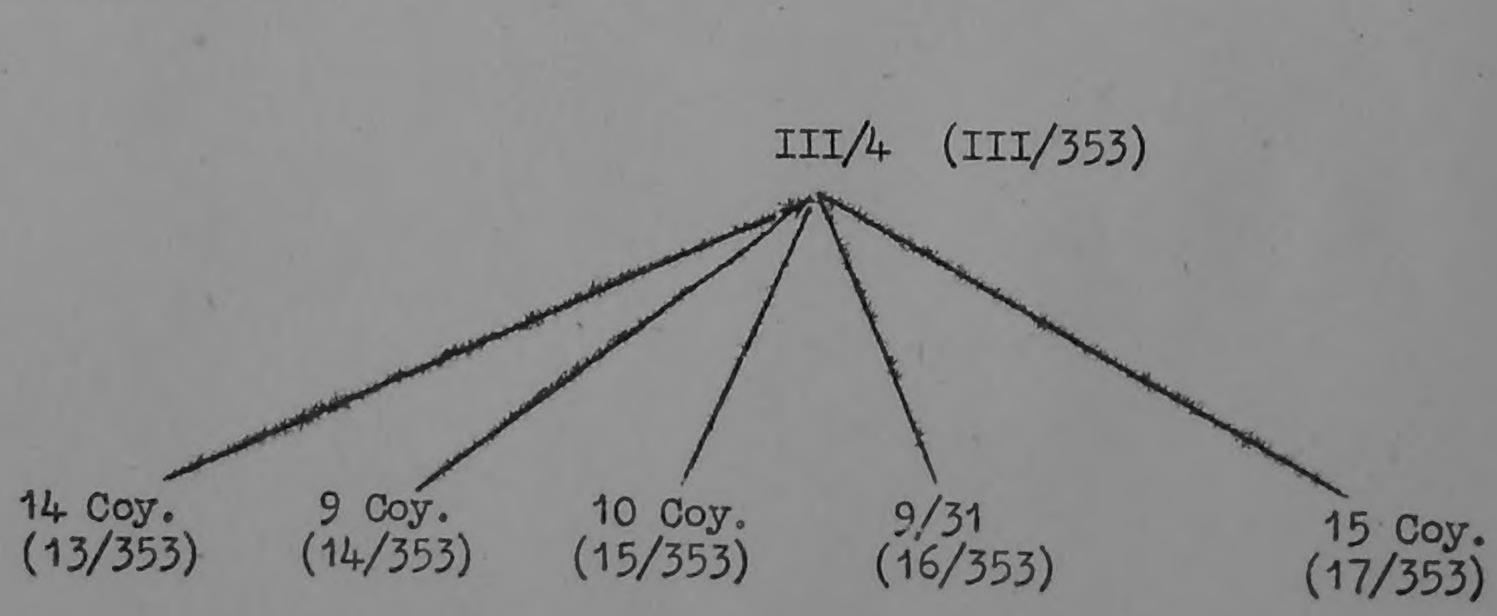
The formation of a listening regiment in the east at an earlier date would certainly have been advantageous.

At the end of April 1945 the Abteilungen were directly subordinated to the Luftflotten. The evaluation company at regiment was dissolved and the personnel transferred to the Abteilungen.

ORGANISATION OF LN.RGT.353



REFORMATION OF III/LN.RGT.4 AS III/LN.RGT.353



The 9/31 was the former wireless listening company of Ln.Rgt.31 with Fliegerkorps I. The company was subordinated in the summer of 1944.

ORGANISATION AND DISTRIBUTION OF WORK OF EVALUATION OF III/LN.RGT.4

(EASTERN FRONT, SOUTHERN SECTOR)

I. The evaluation in III/Ln.Rgt.4 was done entirely in the 13th Company (evaluation company) and was subdivided into the following sections:

1. Traffic evaluation
2. D/F evaluation
3. Cryptanalytic section
4. R/T evaluation
5. Long range bomber evaluation (ADD)
6. Final evaluation
7. Evaluation for weather reports

All sections worked in close collaboration with one another. Each section was run by a responsible chief, who, as far as work was concerned, was under the command of the chief of the final evaluation section.

I. Distribution of work in detail

1. Traffic evaluation

Interception (telegraphy) was controlled by the traffic evaluation section. Each receiver had its fixed network allotted to it, which was always monitored by the same personnel. The operator was therefore thoroughly accustomed to the peculiarities of the wireless traffic and could help the traffic evaluator considerably. Search sets were especially looked after by the traffic evaluator. Newly established airforce networks were separately monitored till they were finally identified. The further tasks of the traffic evaluation section were:-

Identification and interpretation of radio traffics and their working relationships with one another.

Interpretation of call-signs.

Building up call-sign lists and clarification of call-sign systems.

Each air army was covered by a traffic evaluator, whose job it was to achieve the identification of his air army's wireless traffic. Assistance was available for compiling statistics and keeping lists of call-signs. An NB report (signals traffic report) was made up daily, showing the wireless traffics of the air armies, of their flying units (air corps and divisions), and of their ground organisations, R A B (air force ground area) and B A O (airfield bn.). Wireless traffics of the PWO formations (home air defence) were entered separately in the NB report.

The traffic evaluation section worked specially closely with the D/F evaluation section.

2. D/F evaluation

The D/F staff of the Abteilung got their orders from the intercept room. The D/F values were wirelessed through to the Abteilung

from the D/F out-stations. The evaluation of the individual D/F values was done in the D/F evaluation section. Out of the daily average of 300 D/F orders given, 70-80 usable fixes were achieved. A written resumé of the results was handed daily to the final evaluation and the traffic evaluation sections. The D/F values were reported daily by teleprinter to the Chi-Stelle. A report of the D/F evaluation was issued fortnightly, containing a summary of results, new features and noteworthy events. This report was also sent to the D/F out-stations, to keep them in the picture.

The Soviet radio beacons were also covered by the D/F evaluation section. As the Abteilung had no long wave D/F sets at its disposal, the D/Fing of the Soviet radio beacons was carried out by the a/c safety section of Luftflotte 4. For this purpose, evaluator N.C.O.s were detached from III Abteilung to the a/c safety centre for monitoring, and to control D/Fing. Results were reported to the D/F evaluation section, which after evaluation reported them further to the Chi-Stelle and the chief signals officer of Luftflotte 4. The Luftflotte had planned to use the enemy's radio beacons for the safety of our own formations on operations. This was unfortunately done on only a small scale. The formations were always scared to use the help of these radio beacons for their own a/c safety, although locations, recognition signals and duration of radiation were known almost currently.

In monitoring a distinction was made between

short range radio beacons
long range radio beacons
static radio beacons

Short range radio beacons were operated near the front. They were used for operations by smallish bomber formations in areas near the front. Long range radio beacons were situated in rear areas and principally served the ADD formations for a/c safety on operations.

The recognition signal of the short range radio beacons consisted of 2 letters, which were frequently changed. The recognition signal of the long range radio beacons consisted of a name (e.g. Drakon) followed by a dash. The names were kept on for a long time. The short range and long range radio beacons were mobile and could be quickly moved.

Static radio beacons sometimes had names as recognition signals. Others radiated as radio beacon groups with different recognition signals for each sector (I have forgotten the details now).

The picking up of radio beacons was made easier by the monitoring of navigational networks in the air armies. Specially fruitful was the monitoring of the navigational network of the 8th air army. The tactical messages of this network (3 figure code) would be deciphered. Moving of radio beacons, new recognition signals and duration of radiation were thereby mostly known in good time. Exact details and instructions for setting up smoke signals for flying in lanes for fighter and ground attack formations brought our own fighter formations a good number of victories.

Radar monitoring was also done in the D/F evaluation section. The results were very slight. Radar technique was very little developed in the Soviet Union. Sets available were of foreign origin. Radar equipment mentioned in some messages were called "Americans". The existence of only a few sets was established by our own radar

3. Crypt-analytic section

The crypt-analytic section was subdivided into the following branches:

Breaking
2 figure work
3 figure work
and 4 figure work

In the breaking section, new 3 figure and 4 figure codes and their recipherments were worked on till final solution. In the 3 figure and 4 figure sections, the incoming message material was thereafter decoded. There too the new codes were completed and the changing recipherments broken. In the 2 figure section, being the smallest branch, there were carried on breaking and at the same time current decoding of incoming message material.

The Abteilung's crypt-analysis was centralised in the evaluation company. A small amount of independent decoding was done only by the radio listening companies of the Fliegerkorps (pl.) and temporarily detached companies and detachments of the Abteilung.

The strength of the crypt-analytic personnel of the Abteilung was on an average 55, including section heads and auxiliary personnel. When enough message material came in, all 2 figure, 3 figure, and 4 figure codes were decoded. 5-figure codes were not worked on in the Abteilung. These messages were only evaluated from the traffic point of view and sent on to the Chi-Stelle. For the last 2 years no further work has been done on the 5 figure codes at the Chi-Stelle either. How long 5 figure codes were worked on at the Chi-Stelle OKW is unknown. Of the 2 figure, 3 figure and 4 figure message material that came in, an average of 70-80% was decoded in the Abteilung. A striking feature in the southern sector was also the large number of codes. The number of the 2 figure codes got considerably less in the course of the campaign. 3 figure codes had the largest share, while the number of 4 figure codes varied continually. The enemy's systems were retained throughout as far as caesars and code-books were concerned. But increases in difficulty from positions with several equivalents and frequently changing difficult recipherments kept cropping up. Yet they remained breakable. Cipher methods, like the whole of wireless working in general, were influenced fundamentally by the senior signals officer. Difficult codes, well thought-out code tables (Signaltefeln) showed a capable brain as senior signals officer as was the case in the 5th and 17th air armies. In the case of specially difficult codes the enemy often went wrong himself. Frequent repetition of the message and finally reencoding of the text with an old code made a break-in and solution easier. Old codes appeared now and then after a considerable time with a new recipherment. The old code was not recognisable until after fresh key-breaking and establishing true basic values. What looked like machine ciphers (5 letter) appeared occasionally at the end of the campaign. But the message material was very slight and was therefore not worked on.

4. R/T evaluation

The tasks of the R/T evaluation section were:

working on the results of the R/T out-stations

interpretation of call-signs and drawing up of lists of call-signs

grid-square interpretations in systems used by fighter and ground-attack formations

breaking of code tables (Signaltafeln)

keeping the card-index of a/c pilots

collation of R/T results for the daily radio listening situation report

and collation of R/T reports.

The R/T out-stations reported their discoveries daily by teleprinter to the Abteilung and they were evaluated by the R/T evaluation section. Advance evaluation for the requirements of the formation to be served had already been carried out at the out-station. One's own fighter formation was interested above all in R/T traffic during the operation (air to air and ground to air) in order to control its own a/c by these reports. The R/T evaluation section was interested in all R/T link in order from it to clear up the traffic relationships of the flying formations to one another and to make possible the interpretation of call-signs. Call-sign systems were sometimes broken to such an extent that for some formations' call-signs for a week and more in advance could be given to the out-stations. Grid-square interpretations and the breaking of code-tables were carried out in close collaboration with the final evaluation and the crypt-analytic sections. Grid-squares and messages encoded from code tables appeared mostly in R/T networks, in which telegraphic traffic was also passed (e.g. command network of 17th air army). Grid squares were frequently changed, but they were always quickly solved. Signal codes were 3 figure tables, which were sometimes read.

The card-index of a/c pilots, especially of fighter units, was continually extended from our own observation and from prisoners' statements. As fighter a/c on an operation were often called up by the name of the pilot, the unit they belonged to could often be made out after a change of call-signs by just the names of the pilots.

5. Long range bomber evaluation (ADD)

ADD formations were monitored and evaluated separately. The decoding of message material was done in the crypt-analytic section. In detail the tasks of the long-range bomber evaluation were:

evaluation of traffic
evaluation of content
route tracking.

The ADD corps with their divisions were independent formations under the command of the ADD command in Moscow. Later an air army was formed from the ADD formations. They had no ground organisation of their own. The servicing of the formations was done by the Regional Air Bases in the area of operation. A distinction was made between the following kinds of operations:-

long-range operations

front-line operations in support of ground troops

and supply of guerrillas.

Orders for operations were mostly given by wireless and could be decoded. The order came to the division mostly 6-8 hours before the operation. The formations flew only in good weather. Therefore a weather reconnaissance a/c was sent over the target before every operation. Route-tracking was done by D/F. The route could be followed perfectly from take-off to landing.

6. Final evaluation

The tasks of the final evaluation section were in detail:

grid-square interpretations

keeping of ground and air situation maps

keeping of the card-indexes

examination and evaluation of the material brought in by I c

evaluation of prisoners' statements

collation of radio listening reports and summaries

Every air army was covered by a final evaluator who also carried out the evaluation of content of decoded message material. Should the final evaluator not know Russian, which seldom happened, he had a translator at his disposal. PWO formations were covered separately by an evaluator. The air situation maps were also kept by the men covering the air armies. The ground situation map was kept up to date by the army liaison officer. Grid-square interpretations were covered by specialist evaluators. Grid-squares were principally met with in the flying formations. Systems were not uniform and were frequently changed. Grid-squares were always given in 6-digit numbers. To begin with, breaking was made easier by the addition of the first and last letters of the enciphered place-name. Later in some formations, the grid-squares were reciphered by arbitrary names.

The card-indexes were kept by card-indexers. The following indexes existed:

card-index for flying formations
card-index for ground organisation
card-index for army formations
card-index for names
card-index for airfields

These card-indexes were kept constantly up to date. Any changes, even the slightest, were recorded. The card-indexes formed the most essential basis for the work of the final evaluation section.

I c kept the Abteilung supplied with all kinds of P/W interrogation reports, photographs, summaries and single reports on the enemy, which provided good data for confirming its own findings and clearing up obscurities.

Prisoners' statements were as a rule not evaluated in the radio listening reports. If a statement had to be quoted along with them, a note to that effect was added. An experienced evaluator N.C.O. was employed at the interrogation centre of Luftflotte 4, to interrogate prisoners for the requirements of the radio listening service. Prisoners of special interest to it were sent by I c direct to the Abteilung for interrogation. The telephony out-stations had the right to interrogate immediately prisoners belonging to the enemy air force (shot-down crews). In the matter of captured material, wireless traffic data of all kinds and sets were of interest to us. Shot-down a/c offered a wealth of material for this. There was a Luftflotte standing order to all G.A.F. units, to send all captured wireless material to the nearest radio listening station of the G.A.F.

The following reports were issued by the Abteilung:-

immediate reports

daily radio listening situation report

and the fortnightly radio listening situation summary

Immediate reports dealt mainly with the discovery of concentrations, intentions to attack, moves of flying units and ground organisations, and units appearing for the first time. These reports had to be communicated forthwith to Luftflotte 4 and the regiment. This was usually done by telephone, enciphered by means of a table of cover names.

The daily situation report and the fortnightly situation summary were compiled by the chief of the final evaluation section. The staff covering the air armies and the chiefs of the R/T and the long-range bomber evaluation sections furnished the contributions to it they had already worked out. An advance copy of the daily situation report was sent by teleprinter. The daily situation report and the fortnightly situation summary were circulated to the following H.Q.s:-

OKL Gen.Nafue 3 Abt.
Luftflotte 4, I c
Luftflotte 4, I c - photography
Luftflotte 4, I c - leaflet-propaganda
Ln.Rgt.353, 25 Coy.
I/353
II/353
Army Group South I c-/air
Commander Sig.Int. 1
Commander Sig.Int. 8

and also to the Fliegerkorps, Flakkorps and Flieger divisions operating in the Luftflotte area.

7. Evaluation for weather reports:

An independent weather evaluation section was set up in the Abteilung by the chief of the Metereological Service in autumn 1944. Weather reports could be decoded. At first no receivers were used solely for intercepting weather reports, but the chief of the Metereological Service planned this for later. Weather messages were sent on to the chief of the Metereological Service and Luftflotte 4.

CAREER IN THE WIRELESS LISTENING SERVICE

12.10.1936 — Entered the Wehrmacht in 5 Coy. of Ln.Abt.11

April 1937 — Transferred to 2 Coy. of Ln.Training and Experimental Abt. at Halle. In 2 Coy. the first wireless listening platoon (motorised) of the G.A.F. was formed at this time.
Since 1936 the listening service in the G.A.F. had been carried on by static listening stations, for the most part with civilian personnel. With the formation of the first listening platoon (motorised) the building-up of the listening service on a military basis in order thereby to create the possibility of using it in the field began.
Monitoring of foreign countries was not yet done by this platoon. The personnel was trained principally in German radio and D/F systems. In the summer of 1937 the platoon was in action for the first time, in a Wehrmacht skeleton signals exercise. Results were absolutely nil. But the exercise did again prove that only the best personnel could be considered for employment in the listening service.
Further the exercise showed the necessity from now on of continuously attaching the wireless personnel to the statio W stations for final training and familiarisation with the wireless traffics of foreign countries.

Oct.37-July 38 — Posted away to courses and to the Kriegsschule.

August 38 — Course of instruction at W station at PULSNITZ.
The area monitored was at that time: Czecho-Slovakia, Poland and the Soviet Union. Special value was put at that time on the results from monitoring Czecho-Slovakia. The Czech air force was intercepted by monitoring the met. network (weather service), the a/c safety service, and army air traffics.

Sept. 38 — Transfer to 2 Coy. of Ln.Abt.Ob.d.L. at POTSDAM-EICHE.

Oct.38-Feb.39 — Posted to force "Stephan" in Hungary as a detachment commander in NYIRIGYHAZA.
The listening stations set up in Hungary in October 38 were formed by the listening platoon of the Ln.Abt.Ob.d.L. This force "Stephan" was formed in spring 1939 by the W z.b.V.
The control station was in BUDAPEST. A separate detachment was at NYIRIGYHAZA and moved in January 39 to DEBRECEN.
D/Fing was done at BUDAPEST, DEBRECEN, SZEGED and later at PAPA. Czecho-Slovakia (till March 39), the Soviet Union, Poland, Rumania, and Yugo-slavia were monitored. Later Turkey and Greece were added to the list. The evaluation and crypt-analytic sections were at BUDAPEST.

Feb. 39 — Transfer to 2 Coy. of the Ln.Training and Experimental Rgt. at KOETHEN as platoon commander of the Wireless Listening and D/F platoon. The platoon's training was kept up by frequent exercises. The wireless personnel were continually being posted to the W stations for instruction.
From time to time the platoon carried out monitoring of the Soviet Union. In the middle of August 39 the platoon was used in East Prussia against Poland. A small detachment remained for special purposes at KOETHEN.

26.8.39-3.10.39 Employment in Slovakia and Poland as commander of a listening detachment.
A detachment of the Wireless Listening and D/F platoon of the Ln.Training and Experimental Rgt., reinforced by evaluators from W stations, was put into service on 26.8. in Slovakia at ZIPSER-NEUDORF. Close collaboration was carried on with an army listening station (a detachment of the static listening station at TULIN), which was already there. The area monitored was Poland. The metereological and a/c safety networks and some air traffics in W/T and R/T were intercepted. The number of clear-text messages rose very quickly after the first days of the invasion. Results were reported to W Control 4 in VIENNA. The detachment later moved to HUMMANEE (Eastern Slovakia) and at the end of the Polish campaign to CRACOW.

4.10.-31.12.39 Course of instruction with the III/Ln.Rgt.Ob.d.L.
The wireless listening and D/F platoon from KOETHEN and the listening detachment from Slovakia came together again after the Polish campaign in the III Abteilung (wireless listening Abteilung) of the Ln.Rgt.Ob.d.L., as the platoon was transferred to the Rgt.Ob.d.L. This platoon with the new title "Listening platoon z.b.V.1" and another platoon "Listening platoon z.b.V.2" became companies in December 1939 and went for employment in the West. At that time the III Abteilung did initial training of recruits but even then they were trained for the requirements of the listening service. The commander of Abteilung III was at the same time the director of the Chi-Stelle at POTSDAM-MARSTALL.

The monitoring of traffic in the Russo-Finnish war was especially interesting at that time. The Soviet operations could be followed perfectly by the wireless listening service. The results of this monitoring provided valuable data for the future of the evaluation as well as for the crypt-analytic sections.

1.1.1940. Attached to Chi-Stelle OKW.

1.1.-31.12.40 Employed as commander of a wireless listening detachment at VARNA (Bulgaria). Listening stations were set up in Bulgaria by the OKW at SOFIA, BURGAS and VARNA. SOFIA and BURGAS were manned by the army, VARNA by the G.A.F. The G.A.F. monitored Syria, Greece and the Mediterranean area. Evaluation was done on only a small scale. There was no crypt-analytic section. Material and results were passed on to Chi OKW and the Chi-Stelle Ob.d.L.

In the autumn of 1940 the G.A.F. planned to expand the listening service in the Balkan area. For this purpose a listening station was set up at CONSTANZA as out-station of the W z.b.V. Further a wireless listening company (motorised) was to be employed in Bulgaria. Therefore in December 1940 the detachment at VARNA was withdrawn and was sent to reinforce the listening station in CONSTANZA.

1.1.-1.2.41 Attached to listening station CONSTANZA.

3.2.41.-Dec.43 Company Commander of Ln wireless listening Coy.(Mot.) 9/4. Parts of company had already been operating in SOFIA since November 1940. The rest of the company was brought there from VIENNA in March 1941. The area monitored was: Yugoslavia, Greece, Mediterranean area, and Turkey. Turkey was covered by an out-station of the company at HUSSI (near PLOVDIV). The company had at its disposal independent

evaluation and crypt-analytic sections. Yugoslav, Greek and Turkish messages were decoded. Decoding of English messages was started by a crypt-analytic section attached to the company from the Chi-Stelle.

The Balkan campaigns brought Sig.Int. good results. The High Command recognised here too that Sig.Int. was an important and indispensable factor. During the Balkan campaigns the company reported its results direct to Luftflotte 4 and to Fliegerkorps VIII. In May 1941 the company was switched over to monitoring the Soviet Union. Some personnel for monitoring the Mediterranean area were given to W 14, which had moved in the meantime from HIRSCHSTETTEN near VIENNA to ATHENS. On the 6th of June the company moved to RAMNICUL SARAT (Rumania) to Fliegerkorps IV. The company stayed with the Corps till September 1941. In that period the company was able continuously to report to the Corps important information discovered about the enemy. At the end of September the company joined the III/Ln.Rgt.4 at NIKOLAIEV and since then has remained directly with the Abteilung.

April to March 1942 command of a telephone out-station with Fliegerkorps VIII for the Kertsch and Sevastopol offensive. In June the Abteilung moved to MARIUPOL. In September to KISSLADOWSK (Caucasus). On the retreat starting, the Abteilung moved back to MARIUPOL on 8.1.43.

10.2.-27.11.43 Commander of a listening detachment in EUPATORIA (Crimea). This detachment was put into service in the Crimea to meet the desire of Fliegerkorps I to have a Sig.Int. of its own. The area monitored was at that time the 4th and 5th air armies in front of the Kuban bridgehead. The detachment had an independent evaluation and crypt-analytic section.

Dec.43 - end of war Employed as Abteilung commander of III/Ln.Rgt.4.
The Abteilung had meanwhile moved from MARIUPOL with a short stay at KRIWOJ ROG to KAMMENSKOJE near DNJEPROPETROVSK and in September 1943 to NIKOLAIEV. Because of further enemy pressure the Abteilung moved at the beginning of March 1944 to ODESSA and in the middle of March 1944 to BACAU in Rumania. In order to have better signals communications, a move was made at the beginning of April to DEBRECEN (Hungary). In September 1944 the Abteilung had to move to HORN near VIENNA. A company for monitoring flying units was left with Luftflotte 4 direct, as frequent interruption of line communications had to be reckoned with then. At the end of April 1945 the move to MUENZKIRCHEN near PASSAU took place. On 3.5.45. the last move to TAUPLITZ (Styria). On 8.5.45. at 1200 hours operation was stopped on the command of Luftflotte 4.

In the campaign against the Soviet Union the wireless listening service fully proved its worth as a source of information about the enemy and received full recognition from the High Command. Especially during continued spells of bad weather, at the time of the retreat and when difficulties of supply, especially of M/T fuel, were met, the listening service had for the High Command a constant flow of reports on the enemy, which provided it with an exact picture of the enemy situation. There was never a Schwerpunkt or an intention of a large scale attack which was not reported in good time by the wireless listening service. According to a statement of the I c of Luftflotte 4, the listening service had an 80% share in usable reports on the enemy.

COLLABORATION WITH THE SIG.INT. OF ARMY AND NAVY AND WITH THE HUNGARIAN LISTENING SERVICE IN THE SOUTHERN SECTOR.

(a) In the southern sector there was close collaboration with the commander of Sig.Int. 1 and later also with the commander of Sig.Int. 8. The methods of the army Sig.Int. were essentially the same as those of the G.A.F. Liaison officers and N.C.O.s were exchanged and were occasionally used in the final evaluation sections. Reports, summaries, and experiences of interest were constantly exchanged.

The large number of search sets used in the army was of special significance to the G.A.F. Newly established air force traffics were handed over to the G.A.F. immediately by the army. A good deal of time-wasting search work was spared us thereby.

For assessing the general situation the G.A.F.'s reports were indispensable to the army. Especially when radio silence came into force in the army units, the army listening service had to assess even the ground situation chiefly from the reports of the G.A.F.

The first indications of the formation of a Schwerpunkt and of impending attacks were often in the monitoring results of the G.A.F.

(b) The navy in the southern sector had the Black Sea Fleet of the Soviet Union as its monitoring area. As the Black Sea Fleet's code was unbroken, results could only be achieved by traffic and D/F evaluation. There were navy monitoring stations at CONSTANZA and EUPATORIA (Crimea).

The navy was specially interested in the monitoring of the Black Sea seaplane forces. The seaplanes were monitored by the Abteilung itself, by a company in CONSTANZA and an out-station at EUPATORIA (Crimea). The navy was kept posted on results. The Black Sea seaplane forces consisted of bomber, torpedo, fighter, and sea rescue units. Bases and strength were currently known (last total strength about 180 a/c.)

The signal code of the reconnaissance a/c could be decoded. The guiding of our own fighters by the listening service on to reconnaissance a/c on operations often brought us victories. The navy was specially interested in recce reports about our own ship movements, particularly for reports of positions and courses of our convoys, as after a report by the recce a/c attacks by a/c or submarine could usually be reckoned with. The calling up of fighter protection, timely warning and changes of course often foiled the enemy's existing intentions to attack.

(c) There had been collaboration with the Hungarian listening service since the creation of the W z.b.V. It consisted rather of getting the Hungarians used to the methods of the German listening service. The Hungarian listening service never showed great capabilities. It lacked capable brains, especially in crypt-analysis. The Hungarians were naturally interested mainly in monitoring Rumania and Yugoslavia. Their results were always very slight. In the German view the Hungarian listening service lacked absolute reliability. For that reason recovered codes were not passed on to them either.

In spring 1942 a Hungarian listening company came to the Eastern front for operation. The Abteilung attached a liaison detachment to this company. After operating for a year the company was withdrawn. Successes had been very slight.

After the dissolution of the W z.b.V (end of 1942) there remained with the Hungarian listening service only a small liaison detachment of the G.A.F.

When the Abteilung moved to DEBRECEN in April 1944, closer liaison with the Hungarian listening service was resumed. Of the existing Hungarian listening batallion, a company, which had up till then monitored air force traffic, was put under the command of the Abteilung for operational purposes. The company had an evaluation and a crypt-analytic section of its own, but they were of little value.

The company was employed within the framework of the Abteilung purely as an intercept company with definite networks allotted to it. The messages were worked on in the Abteilung. The company later moved with the Abteilung to Reich territory, and was in every respect sub-ordinated to the Abteilung. The company had done its work well. Direction and discipline even at critical moments were faultless. On 1.5.45. the company had to be given up according to orders, and was moved to a Hungarian collecting camp.

R/T MONITORING IN THE SOUTHERN SECTOR OF THE EASTERN FRONT

R/T monitoring in the southern sector of the eastern front was not taken up intensively until spring 1943. Although previously search for air force R/T traffics had been carried out without a break, results had been very slight. As a contrast, in the morthern sector (Leningrad front) and in the central sector (Moscow front), busy R/T traffics, air to air and ground to air, had appeared early on and were turned to good account by the wireless listening service. Telephony out-stations operating in spring 1942 in the Crimea during the Kertsch and Sevastopol offensive had no success in monitoring flying units. Only a few practice R/T traffics in the Caucasus area were covered. Incidentally busy R/T traffics of army units were intercepted and their evaluated results often provided worthwhile single targets for the G.A.F. A telephony out-station operating in autumn 1942, in the Terek sector (Caucasus) also gained very few successes. It was not till after the retreat, namely in the spring of 1943, that very active R/T traffics of fighter units, air to air and ground to air, appeared in the southern sector in front of the Kuban bridgehead. R/T monitoring put into operation immediately afterwards brought good results from now on. The fighter units of air army 4 were principally equipped with the LAG-3 and 2 regiments with Airacobras. R/T traffics of ground attack units (IL - 2) appeared on only a small scale. The interception of the fighter escort's R/T traffics made it possible to guide our own fighters on to the approaching ground attack formation.

With every Jagddivision there was a control station near the front line which controlled the fighters on operations. After the take-off a short traffic was started with the control station for tuning purposes. The ensuing conversations were carried on without any great secrecy. Place names, allo-cation of areas of operation, recognised targets, and orders to attack were given openly. German a/c were generally called "bandits", or the exact a/c type was given openly. The recce a/c Focke-Wulf 189 was called "RAMA".

The frequencies on which the traffics were carried on lay between 3000 and 4600 kcs. There was a preference for the frequencies around 4000 kcs. Each fighter regiment had its call-sign allotted to it (e.g. Orol, Tschaika, etc.). The individual a/c had in addition a one or two digit number. At that time call-signs were usually not changed for 10 days. Later call-signs were changed after a short time. A/c were also often called up by the name of the pilot. Aces, like Grischkin for example, were always named.

R/T discipline was generally bad at the beginning. A/c and control station often carried on a conversation without any restraint. Praise and censure were often given verbally to the a/c by the control officer. But later R/T discipline improved considerably. Above all, it was realised that R/T traffics were being intensively monitored by the German listening service and the results used for controlling fighters.

R/T traffics of bomber units were monitored intermittently. From the summer of 1944 onwards, the R/T traffic of ADD formations on operations was continually intercepted. R/T discipline was very good and monitoring yielded only slight information.

R/T traffics of sea recce a/c appeared on a small scale. Recce reports were passed on in telegraphy traffic with signal codes.

In the southern sector the aim was to have an R/T monitoring section with each of our own fighter units. Owing to the smallness of our own fighter strength this was also possible in most cases. The R/T out-stations were provided directly by the Abteilung and by the wireless listening companies of the Fliegerkorps (pl.). The strength of the out-stations varied. Yet the aim was to have at least 4 receivers in operation. Operation was carried out immediately with the unit to be served. The immediate evaluator was at the battle H.Q. of the fighter unit and passed on the information to the operations controller who used it to control our own fighters.

A D/F base for R/T monitoring was made up of 3-4 out-stations. Each out-station had one short wave D/F set. The short wave close range D/F sets of Czech origin used at first and the Telefunken D/F set PN 57n did not come up to standard. So the outstations were soon equipped with short wave Adcocks (A 70f), which gave satisfactory results for R/T monitoring. In order to get fixes on approaching units, a good line connection for the out-stations was demanded. Communication by wireless was too slow. As far as was technically possible, the out-stations were wired for a ring landline circuit.

R/T monitoring in the southern sector proved of high value to our own fighter units. Fighters guided by the listening service nearly always came into contact with the enemy and won victories. Especially towards the end of the eastern campaign, the listening service made possible economical employment of our own weak fighter force. Apart from the evaluation of R/T monitoring for its own fighter unit, the information gleaned from R/T traffics concerning the type and strength of enemy units provided valuable support for the W/T evaluation.

WIRELESS LISTENING SERVICE OF THE SOVIET UNION (SOUTHERN SECTOR)

Very little information was available about the wireless listening service of the Soviet Union. A listening service did exist, which was kept very secret. Most prisoners from signals staff had no idea of the existence of such a department. The Soviet wireless listening service carried out mainly traffic and D/F evaluation. A lively D/F command traffic of the Soviet listening service was monitored by the II Abteilung (central sector).

In the area of Luftflotte 4, a member of the Soviet listening service was once interrogated but unfortunately he did not know much. A cryptanalytic section is stated to have existed, but it was kept strictly apart even from other listening personnel. It is alleged to have worked with little success. All German traffics discovered and those of their allies were monitored. Continual watch was kept on German R/T traffics.

At ODESSA there had been a school at which 2-year courses for the listening service were carried on. In the southern sector a large static listening station is said to have been at TUAPSE.

During the Kertsch offensive some charts of the Soviet listening service were captured by a wireless listening company of the army. They showed results of traffic and D/F evaluation of German and Rumanian wireless traffics. Call-sign interpretations were partly right. Locations of H.Q.s (D/F results) of German and Rumanian staffs were sometimes right, sometimes completely wrong.

No exact picture of the Soviet listening service, especially of its efficiency, was gained during the course of the campaign.

According to the few statements available, the Soviet Union was endeavouring to develop its wireless listening organisation into an effective instrument (a few more schools of the listening service are said to have existed apart from ODESSA).

Difficulties probably lay in the breaking of German codes (machine ciphers) and in the less highly developed wireless technique of the Soviet Union. Suitable sets for intercepting German wireless traffics were probably not always available.